

Understanding How Park Ecosystems Are Changing

2nd Biennial Monitoring Symposium, Southwest Alaska Network

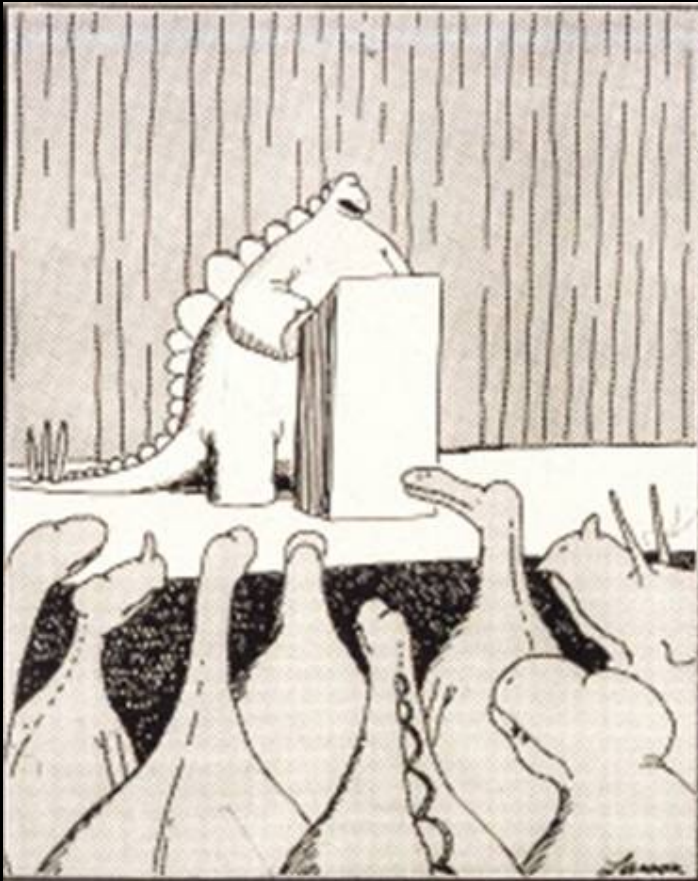


Unnamed glacier near Cape Douglas, Katmai National Park and Preserve



... *digression* ...

1st Biennial Monitoring Symposium, SWAN



"Ladies and gentlemen, the picture's pretty bleak, , , , the earth's climate is changing, the mammals are taking over, and we have a brain about the size of a walnut."

2nd Biennial Monitoring Symposium, Southwest Alaska Network

- Context for today's presentations
- Introduction of our speakers

Alagnak
Wild River



Aniakchak



Homer

Katmai



Lake
Clark



Kenai
Fjords



Monitoring in National Parks

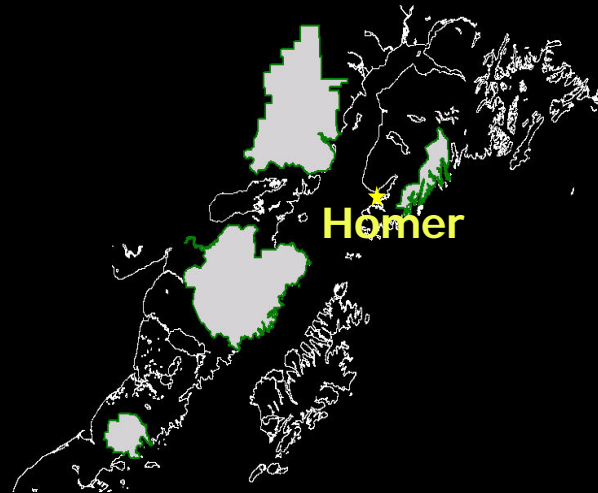
The purpose of long-term monitoring is to:

- 1) determine the status and detect changes in the condition of park resources; and
- 2) to provide timely and accessible reports on the status and trends of park ecosystems to park managers and others.



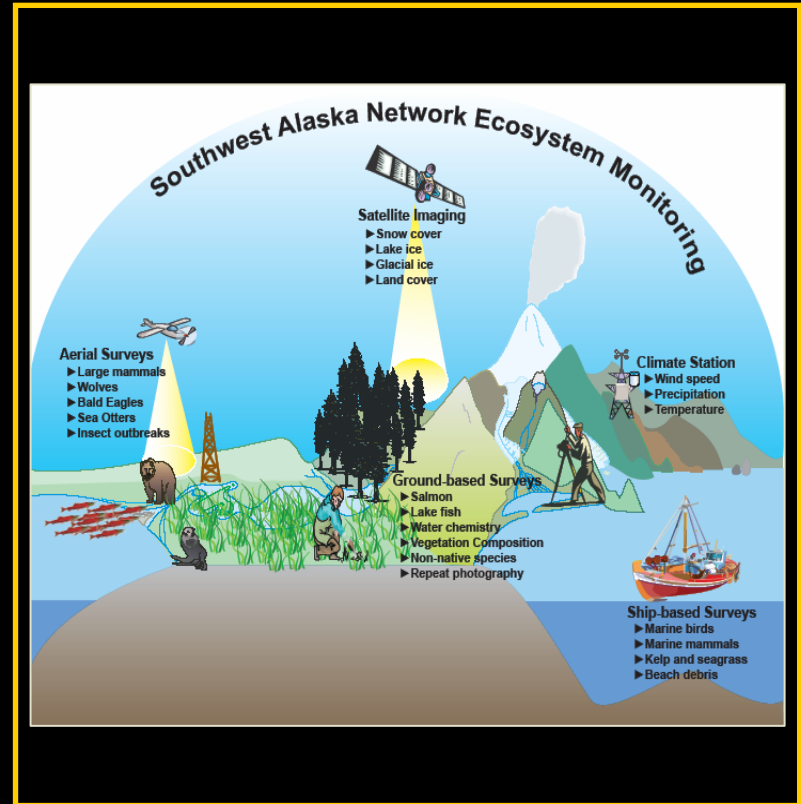
Monitoring in National Parks

Long-term monitoring will focus on "*Vital Signs*," which are physical, chemical, and biological elements and processes of park ecosystems that represent the overall health or condition of park resources.



Monitoring in National Parks

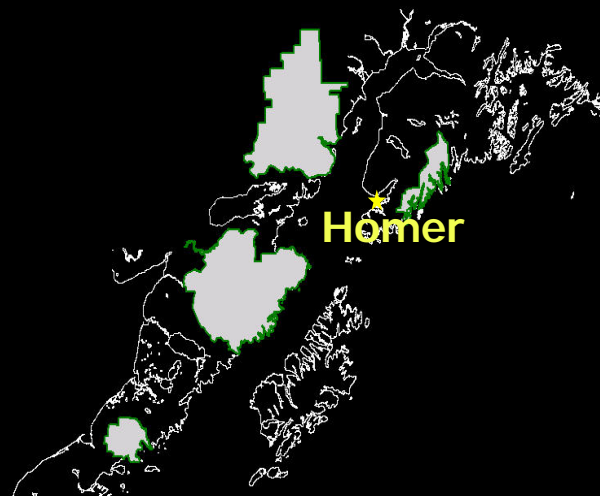
Monitoring from a holistic perspective that covers a wide range of ecological levels; and utilizing a variety of sampling techniques from satellites to ground-based measurements.



Monitoring in National Parks

A goal of the SWAN monitoring program is to strengthen the understanding and appreciation of science in our national parks.

The purpose of Biennial Symposia is to provide an opportunity for project investigators to report to park staff, cooperating agencies, and the public on progress, significant findings, highlights, and future plans.

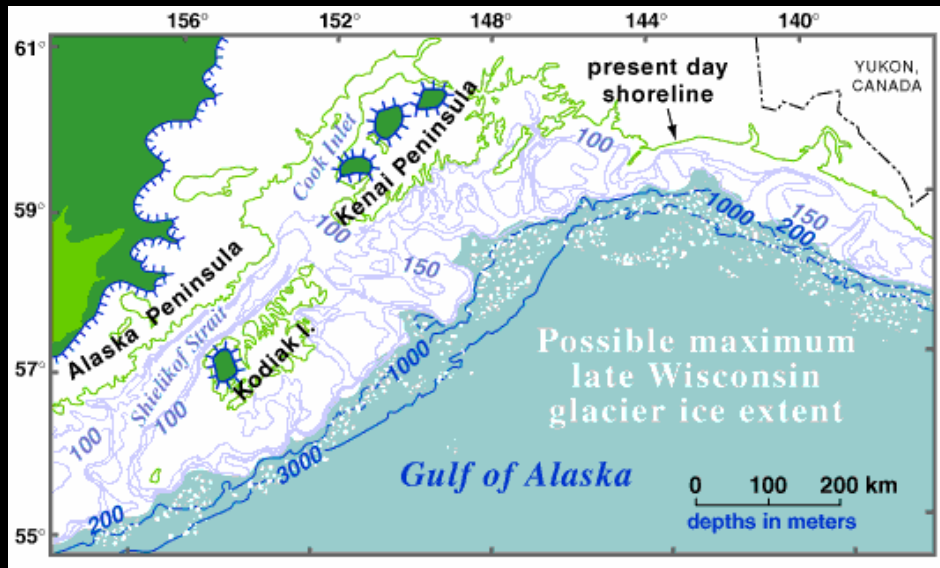


2nd Biennial Long-term Monitoring Symposium



Understanding The Past-

Historical perspectives are valuable for answering a host of questions about the origin of present day park ecosystems and for providing context for the interpretation of information that will arise from future monitoring.



During the last 10,000 years, Southwest Alaska moved from a glacial state into the present interglaciation, known as the Holocene. In the course of the transition, ice sheets receded, large lakes formed, sea level rose, land and ocean surfaces warmed, and moisture became redistributed. These events also set in motion a series of adjustments to regional climate that caused changes in vegetation communities, the formation of new plant communities, and shifts in the biogeographic range of animals. The legacy of these events is the present composition of ecosystems—and their distribution on the landscape.



Understanding The Past-

Forty Years of Change in Glacial Ice Coverage

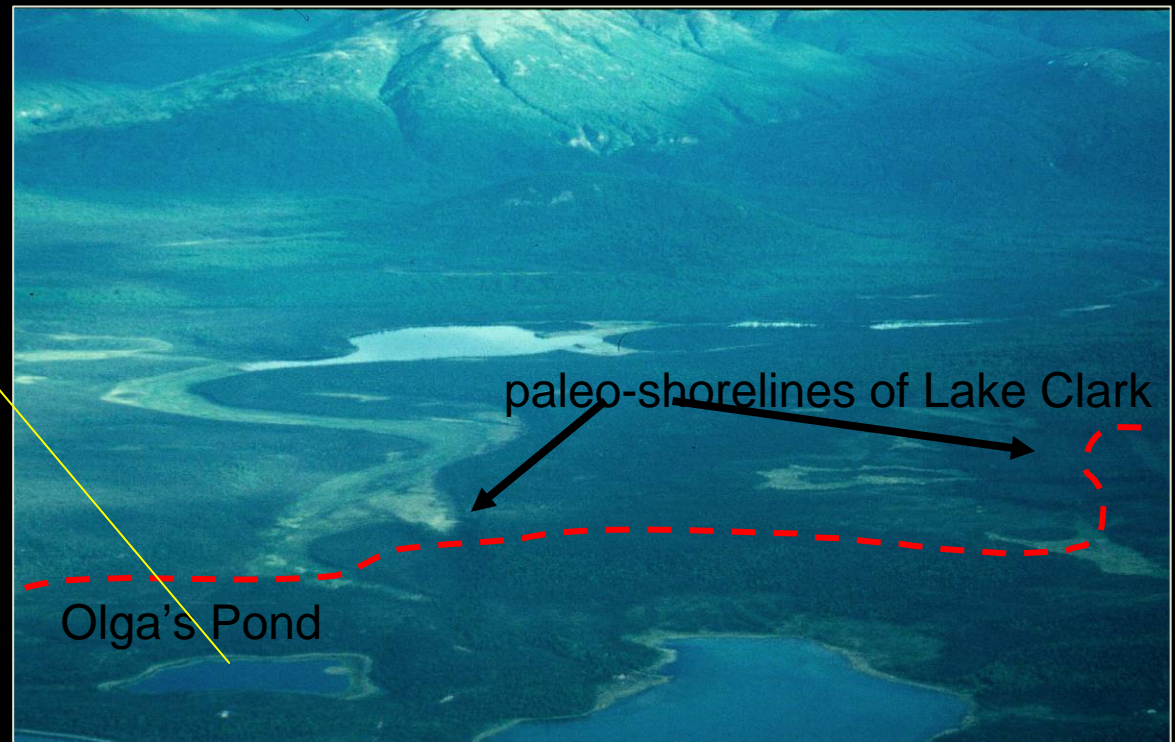
Bruce Giffen,
SWAN-NPS Alaska
Regional Office



Understanding The Past-

Paleo-environmental Reconstruction and Landscape Interactions

Patricia Heiser,
University of
Alaska-Fairbanks

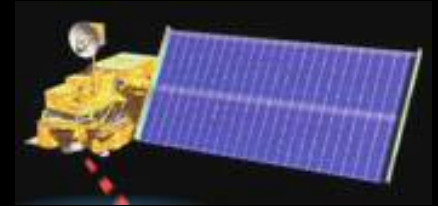


Understanding The Past- Historic Insect Outbreaks

Ed Berg,
USFWS-Kenai National
Wildlife Refuge



Understanding The Past- Changes in the Duration of Lake Ice Cover and Snow Cover



Page Spencer,
SWAN-Lake Clark
National Park &
Preserve



Understanding The Past-

History of active volcanoes in the SWAN and recent eruptions

Tina Neal,
Alaska Volcano Observatory



Understanding The Past-

A Century of Landscape Change as Revealed by Repeat Photography

Torre Jorgenson,
ABR



Poster Session Seminar Room



- Long-term Ecological Monitoring in the Southwest Alaska Network
- Landscape Change as Revealed by Repeat Photography
- Nunatak Plant Communities at Kenai Fjords and Lake Clark National Parks
- Marine Nearshore Monitoring at Katmai National Park
- Landscape Changes and Lake Productivity
- History of Lake Basins in Lake Clark National Park
- Landsat-based Monitoring of Vegetation in the Southwest Alaska Network
- Tree-ring Construction of Historic Insect Outbreaks
- Population Genetics of Black Bears on the Kenai Peninsula
- Montane-nesting Birds in Katmai and Lake Clark National Parks

